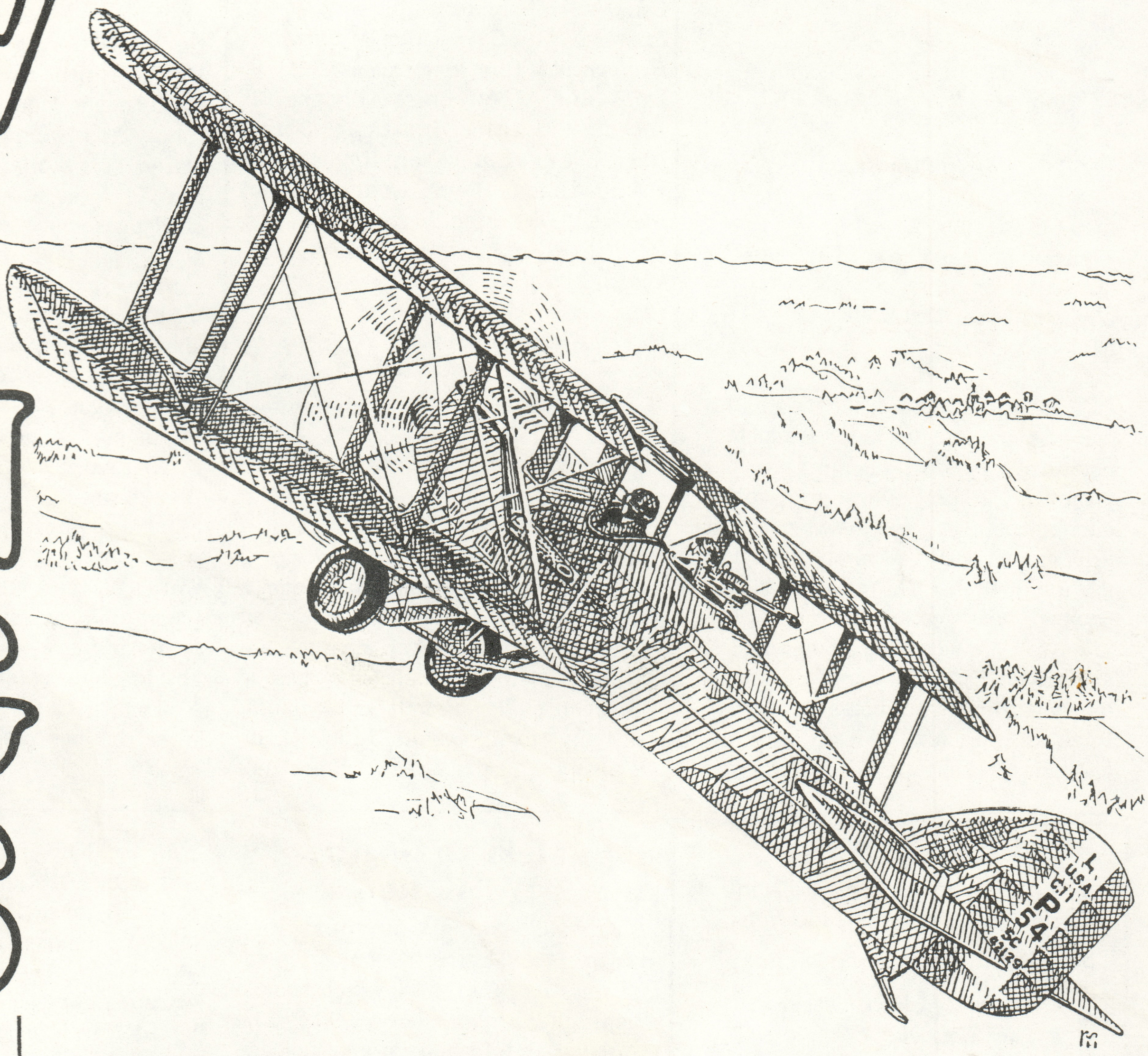
YANKEE WINGS



Packard LUSAC 11

Page 4

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Yankee WINGS

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SNAFU

by Jim Hanford

sna - fu \ sna - 'fu \n.
[situation normal all fouled up]
(ca. 1940): confusion, muddle -
Webster's Ninth New Collegiate Dictionary

If there is a word of the month, this one gets my vote, because, as much as our staff wanted to get this issue out promptly, there were too many interferences that got in the way. (WWII veterans and buffs will surely appreciate the implication.) The major obstacle, however, was yours truly, who is still trying to learn where are all the handles, and in which order they are pulled to get the magazine to your home by the *first* week of the month. You have my apologies and my promise to improve each month's publication.

Now for the good news: this month's line-up of articles. Bob Pauley's cover story presents another chapter in aviation history which also has a Michigan angle: aircraft and engines built by the Packard Motor Car Company. Founder and first President, Dennis Norton's account of how the north hangar doors were opened is both timely (as we contemplate similar action for the *south* doors), and nostalgic, as we remember earlier challenges which were met and beaten. Dennis has both the inclination and a superior vantage point for recording the YAF's early history, and we look for similar accounts in future issues. Another article covers the acquisition of our latest gate guardian.

An unusual surprise awaits the reader in Toni Koski's "BUFF Briefs", and in this month's "Tale Spins", Jack Stankrauff presents an aviator whose very name has become a household word. We had intended to include a report of Founders' Day and the Willow Run Air Show, but simply were not able to get the copy ready by press time. You may get a flavor of them, however, from the photo-essay in the center spread.

CONTENTS

3 | YAF History: Opening the North Hangar Doors – *by Dennis Norton*

4 | LUSAC-11 – *by Robert F. Pauley*

6 | Tale Spins – Chuck Yeager – *by Jack Stankrauff*

7 | BUFF Briefs – *by Toni Koski*

8 | Photographic Essay: 1987 Founders Day/Willow Run Air Show – YAF Photo Committee

10 | Revving Up the YAF – *by Les Langlois*

11 | Membership Report – *by Charles Lingenfelter*

12 | Board of Governors' Meeting

16 | Monthly Calendar – *by Stan Reich*

M-48 To Guard Willow Run

Anyone visiting the Willow Run hangar since the start of summer could not miss it – the M-48 which stands silent guard over the Yankee Air Museum. Before you curious readers reach for your *aircraft* recognition sources, there's a catch: the M-48 is a Patton tank.

Nicknamed by the U. S. Army for George Patton, Jr., the legendary WWII armor commander, our new gate guardian is an M48A1, which was built in 1948 by General Motors' Fisher Body Plant in Grand Blanc, MI. Shortly thereafter it was acquired by the Environmental Research Institute of Michigan (ERIM), which is affiliated with the University of Michigan. (It was from ERIM that we purchased our C-47, "Yankee Doodle Dandy".) The tank's continuing "mission" has been as a target vehicle for radar and infra-red detection systems developed and tested by ERIM. It has never seen actual combat, however it has seen extensive "action" at various sites on the Willow Run Airport and in the dense woods across Beck Road. The real enemy has been vandalism, which on occasion has prevented the machine from rendering service when needed.

The solution involved a loan of the vehicle to the YAF for restoration and maintenance in working condition in

(Continued on Page 15)

Dennis Norton Recalls...

HOW WE FIRST OPENED THE YAF HANGAR DOORS

Editor's Note: This is the first in a series of articles about the early history of the Yankee Air Force by Dennis Norton, a founding member and first president of the YAF. Because Dennis has been active in the organization ever since it was formed, he has been in an ideal position to gain an insider's view of the YAF's early history, much of which was never recorded. Those of us who didn't become members until later should find this series especially interesting because it gives a fuller perspective on the development of the organization that we tend to take for granted today.

When the newborn Yankee Air Force took possession of the present headquarters hangar at Willow Run in January of 1982, it had not been used as an aircraft hangar for some three decades. Until the 1970s, it had been filled with offices – two floors of them. Then most of the offices were removed, leaving only a massive wall about a foot and a half inside the big hangar doors at the north end of the building from the floor to the rafters.

We knew that if the hangar was to be of any practical use to us as an aviation historical museum organization, that wall had to go. The question was – how?

At that time, we had no equipment to handle a project of that scope – dismantling a wall 30 feet high, 120 feet long and built of 2x12 lumber, plywood and gypsum board. Adding to the challenge was the temperature; January and February were among the coldest in years and we regularly worked in below-zero conditions with wind and snow blowing through cracks and broken windows. There was no heat in the building except for a torpedo heater where we would gather to thaw out when the chill bit too deeply.

Larry Silver managed to get some of the electrical circuits in working order, giving us lights and a socket for a coffee pot. Hank Koski worked on a heat panel in the entry and we all launched an attack on the wall.

Our first plan of battle was to use hand saws to cut away some of the 2x4s supporting the big 2x12s, after which we intended to remove the 2x12s, one at a time. After spending a Sunday in zero temperatures with absolutely no results, we scrapped that plan in favor of an attack in force aimed at pulling the wall down in big chunks.

Jim Shepherd and I punched holes through the wall, near the top, and Ron Haviland, Jerry Luther and others took turns trying to toss a hammer with a rope attached through one of the holes without hitting Jim or me – or any of the hangar door windows. Jim and I both avoided bodily damage but one of the windows wasn't as lucky. It's still broken.

Once the rope was through a hole in the wall, Jim or I would tie it around the top of a 2x12 and head for safety below. Then Ron Haviland and six or eight other men would put all their weight into that rope until a section of the wall was ripped loose and fell to the floor in a tremendous cloud of dust. And this was the way we brought the whole wall down, piece by piece, in the next four weeks.

Now it seemed the only thing keeping us from opening the hangar doors was an old shed on a cement platform, attached to the last hangar door to the east. About 10:30 one night, Jim Shepherd and I managed to remove enough of the shed to provide clearance so the doors could be opened.

The next day, a work crew that included Lee Koepke, Ron Haviland and Bill Gray managed to open a few of the doors, aided by liberal applications of oil and much prodding, pushing, prying and profanity. However, the center doors wouldn't even budge.

Lee Koepke checked and found out that over the years the roof rafters had sagged until the center of the span over the hangar doors was resting on the doors. In other words, the center doors actually were supporting the roof – another problem we hadn't anticipated!

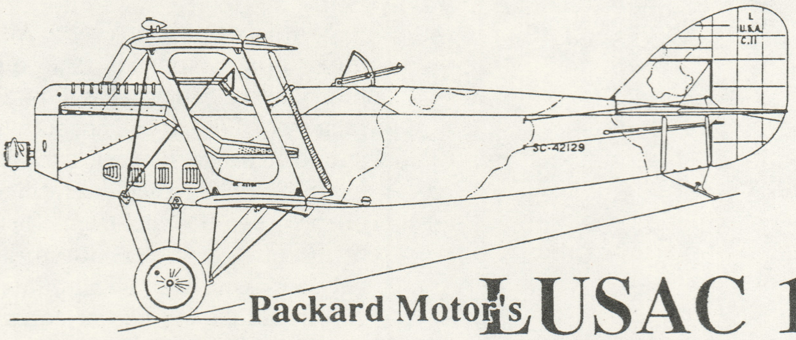
But the Can-Do spirit was thriving in Lee, Ron and Bill. They decided to raise the roof – literally, not figuratively. Ron suggested propping it up with a telephone pole, but our supply department just happened to be out of them at the moment. So Lee and Bill came to the rescue, piecing together 2x12s salvaged from the remains of the wall until they had formed a 30-foot post, 14 inches square.

With a block and tackle and a lift truck that Lee had borrowed, the post was placed under the center of the end rafter with a 20-ton jack under it. While the rest of us held our breath and crossed our fingers, Ron Haviland cautiously jacked up the rafter about two inches and the center doors were free at last. With

(Continued on Page 11)

Michigan's Aviation Heritage

by ROBERT F. PAULEY



Packard Motor's LUSAC 11

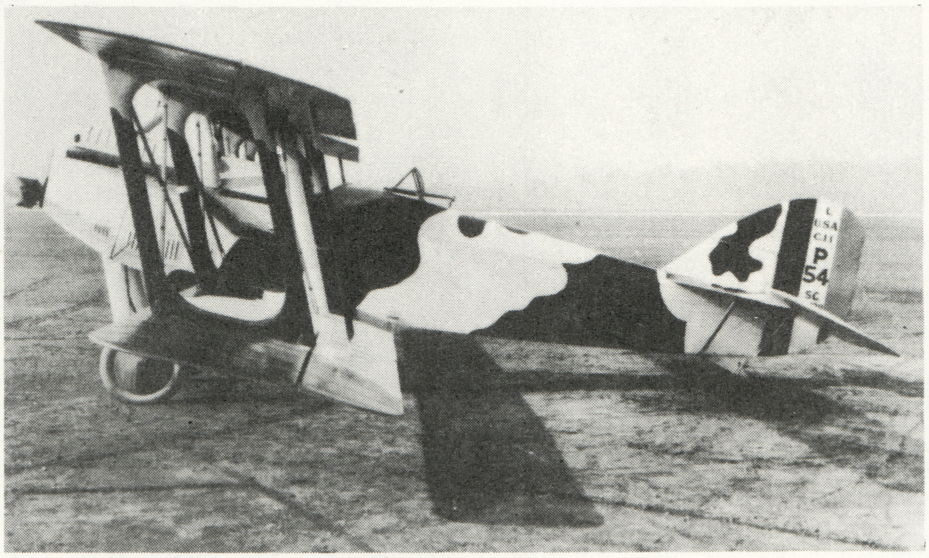
On April 6, 1917, the day the United States declared war on Germany, our country was totally unprepared to wage aerial combat over the battlefields of France. Although the U. S. Army had been the first to purchase a military flying machine, (the two-seat Wright Model A Flyer, in February 1908), and was among the first to establish an Aviation Section, (formed in July 1914, as part of the Army Signal Corps), we had fallen far behind the rapid developments taking place in the skies over Europe. When the nation entered World War I, the Aviation Section had only 55 airplanes on charge, most of which were underpowered training types unsuitable for combat. By contrast, the British, French, Italians and Germans had, as of that date, developed large air forces, including well-armed and powerful fighter, bomber and observation craft far in advance of what was being built on this side of the Atlantic.

Aware that our aircraft were not equal to the latest European designs, our government leaders followed the usual American approach and formed an investigating committee. The resulting Bolling Commission was headed by Major Raynal Bolling, and with a large delegation of aviation experts, they sailed for Europe on June 17, 1917. Their objective was to visit aircraft and engine manufacturers in Great Britain, France and Italy, and to establish a plan for the U. S. aircraft industry to follow as it geared up for mass production. The Bolling Commission returned with a number of sample European aircraft, and completed it's written report in August, 1917. Although their conclusions and recommendations drew much criticism and debate, the commission proposed a program to build the following: a two-seat fighter based on the British Bristol fighter, a long-range day bomber (a variation of the British DeHavilland DH-4/DH-9 series), and either the Italian three-engined Caproni bomber or the British Handley Page twin-engine bomber. It was also determined that an adequate supply of single-engine fighter aircraft were available from various British and French manufacturers for use by our Air Service pilots overseas, hence none of that type should be built in this country. The American aircraft industry, which at that time was quite small and had limited production facilities, was encouraged to follow the commission's recommendations, and where possible, to make use of the large automobile manufacturers' production facilities.

Even before the formation of the Bolling Commission, a Bureau of Aircraft Production had been formed for the purpose of establishing large-scale manufacturing facilities in this country. This group had soon arrived at the conclusion that no airplanes could be built without suitable engines to power them, however there were no suitable engines available in this country. As a result, the board proposed the creation of a U. S.-standardized aircraft engine that could be built in a variety of shapes and power outputs (6 cyclinder in-line, V-8, V-12, etc.) and which would incorporate mass-production techniques and interchangeability of parts. The long lead-time required to design, test and develop an engine made this an urgent task, so Edward Deeds, head of the Production Board in Washington, D. C., invited E. J. Hall of the Hall-Scott Aircraft Company and Jesse G. Vincent of the Packard Motor Car Company to meet with him in May 1917. When Deeds expressed his concern about the lack of a suitable American aircraft engine, both Hall and Vincent offered their services to the Board. Vincent was Vice-President of Engineering for Packard, and in 1915 had designed a Packard V-12 aircraft engine. Hall had designed and built a series of 4 and 6-cylinder aircraft engines for Hall-Scott. The two men returned to their rooms in the Willard Hotel in Washington, combined their talents and, over a period of six days, designed and produced a set of drawings for a basic engine, which was called the "U. S. standardized engine concept", but which later came to be known as the "Liberty" engine. Hall and Vincent delivered the drawings to the Production Board on June 4, 1917, and received an immediate OK to build and test a prototype engine. Vincent returned to Packard's aircraft-engine manufacturing facility in Detroit, and twenty-one days later, on July 3, 1917, delivered the first mock-up engine to the Production Board in Washington. A test engine, also a V-8, was run for the first time at the Packard plant on July 22, 1917. The Aircraft Production Board had by that date decided to concentrate on the 400 hp V-12 version of the Liberty engine for future aircraft designs, especially since it had become clear that the trend in Europe was toward higher-powered aircraft.

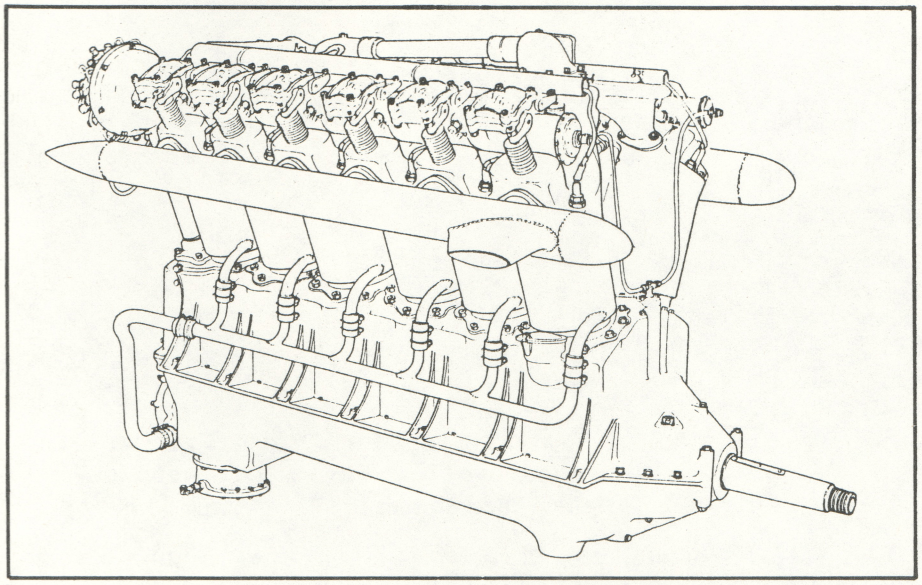
During the years that followed, the engine was built in many

configurations, as 4 and 6 cylinder in-line, and as V-8 and V-12 engines, although the majority were the V-12 "Liberty" version. The Liberty was a water-cooled, 45 degree V-12 engine with a five-inch bore and a seven-inch stroke, giving a displacement of 1650 cubic inches. It produced 400 hp at 1800 rpm. It weighed 900 pounds with radiator and cooling system and ready to install into an airframe. Packard eventually built 6,500 Liberty engines; the Lincoln Motor Car Company built 6,000; Ford built 3,950, and Cadillac, Buick and others built lesser numbers. When production came to an end after the Armistice had been signed on November 11, 1918, a total of 20,478 Liberty engines had been built.



The LUSAC-11, built by the Packard Motor Car Company in Detroit, was the only American designed and built airplane to fly in France during WWI.

The majority of these engines were used to power the DH-4 Liberty plane, which was the day bomber that had been proposed for quantity production by the Bolling Commission in August 1917. The DH-4 was built in Detroit by Fisher Body (1,600 built), in Dayton Ohio by the Dayton-Wright Company (3,106), and by Standard Aircraft in New Jersey (140). Of the 4,846 Liberty planes built during World War I, approximately 400 of them reached the front lines and saw combat. In addition to the DH-4, there were numerous other aircraft built in lesser numbers that used the Liberty engine, and it remained in use for many years after the war. Liberty engines were used to power the NC-4 (the first plane to cross the Atlantic from west to east, in 1919), the Fokker T-2, which made the first non-stop flight across the United States in 1923, and the Douglas DWC World Cruisers which made the first round-the-world flight in 1924.



The Packard V-12 aero engine (sketch by John Batchelor in *Fighter* by Bryan Cooper).

Our Air Service was well aware that progress in aviation does not stand still, and that new designs were constantly being developed by the warring powers as a result of combat experience. McCook Field in Dayton, Ohio, where the Air Service tested their new and experimental aircraft, was also the home of the Airplane Engineering Division. It was there that the Air Service began a program to design and build its own airplanes, based upon reports from American pilots who were flying in combat overseas. To assist the Engineering Division, a French engineer was brought in who was familiar with the latest requirements in aircraft design. He was Captaine Gene Le Pere, and he had been an aircraft designer in France before the United States had entered the war. At McCook Field he quickly applied himself to designing a two-place fighter which received the designation, LUSAC-11. ("L" stood for Le Pere, "USA" for United States Army, and "C" for combat.) the LUSAC was a two-place biplane of wood construction, fabric-covered, and was powered by the 400 hp Liberty V-12 engine. Two prototypes were built at McCook Field,

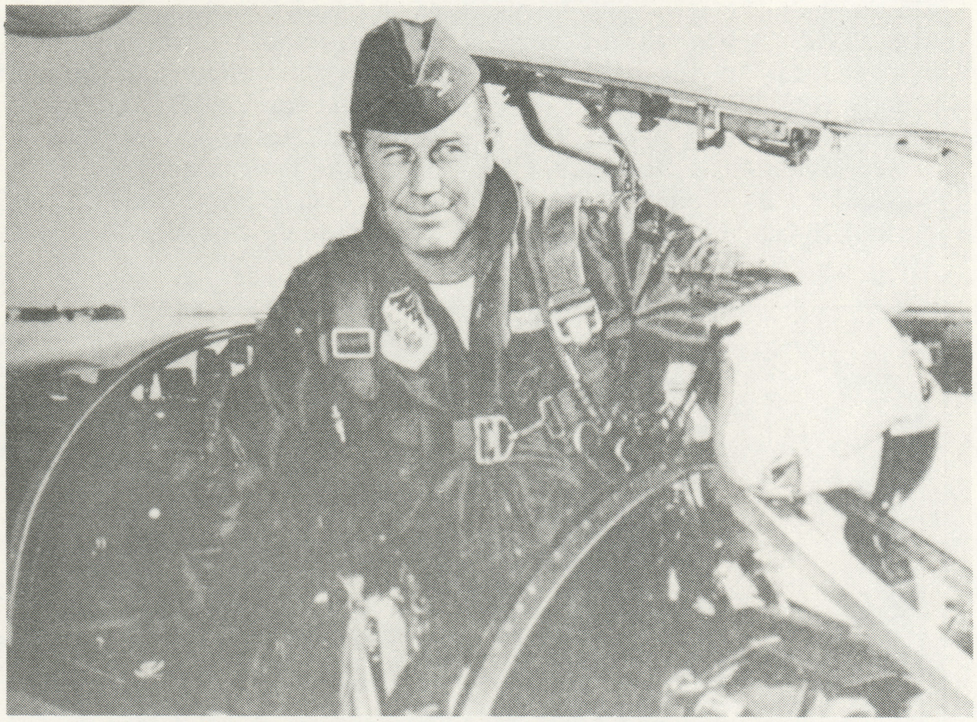
(Continued on Page 13)

"The Right Stuff!"

by Jack B. Stankrauff

Chuck Yeager on returning from the mission in which he downed five Me-109s, October 12, 1944. (USAF)

President Eisenhower presents the Harmon International Trophy to Chuck Yeager, and the Women's Harmon International Trophy to Jacqueline Cochran, 1954.



Col. Charles Yeager in an F-104, also flew the M2-F1 lifting body, which was a test vehicle forerunner at the space shuttle. (USAF)

General Chuck Yeager is a living legend in America's aviation history. More important, his piloting skill and flight achievements (including breaking the sound barrier) have set standards of excellence.

Rough Beginning

Born on February 13, 1923 in Myra, West Virginia, Charles Yeager grew up in a poor family doing farm work and odd jobs. When an Army recruiter came to his hometown in 1941, Yeager enlisted at 18 as an Air Corps mechanic. He applied for and was accepted in the "Flying Sergeants" program. After training on P-39 Airacobras, he became an officer and fighter pilot in 1943 (incidentally, without the benefit of a college degree).

First Combat

On his seventh mission in a P-51 Mustang, he scored a kill on a Me-109. Two days later he was shot down over France. Luckily, he made his way back to England with the help of the French Underground. War Department regulations required that all pilots shot down be sent home lest they, if shot down again, expose to the enemy how they escaped. Yeager fiercely wanted to fly and fight, so he appealed directly to General Dwight Eisenhower and was allowed to return to combat. He returned all right! During one single mission in 1944, he shot down five enemy aircraft. Sixty-four missions and 13 and 1/2 kills (including a Me-262 jet) later, he was rotated home.

Test Pilot

Yeager became the first pilot to graduate from the Air Force's test pilot school in 1946. He flew evaluation flights of the new P-80 Shooting Stars and captured Axis fighters.

He was good – if not the best – and the Air Force knew it. Consequently, Yeager was chosen for the Bell X-1 rocket plane program.

Faster Than Sound

During October, 1947, Captain Yeager flew the X-1 several times at Muroc Army Air Base (later Edwards Air Force Base), California. It was not without hazards! During one flight, on October 10, his canopy frosted over, blinding him. Fortunately, an F-80 chase plane pilot talked him down.

On the night before his faster-than-sound flight, Yeager and his wife went horseback riding. He fell off his mount, breaking two ribs. Fearing

(Continued on Page 14)

Buff Briefs

by Toni M. Koski,
#0469, B52 Crew

Occasionally visitors touring our B52 have asked if a B52 has ever been shot down. Research indicates several were downed by enemy action over Vietnam, but the most amazing story is the BUFF which was shot down over New Mexico by a North American F100 Super Sabre (ANG) on April 7, 1961.

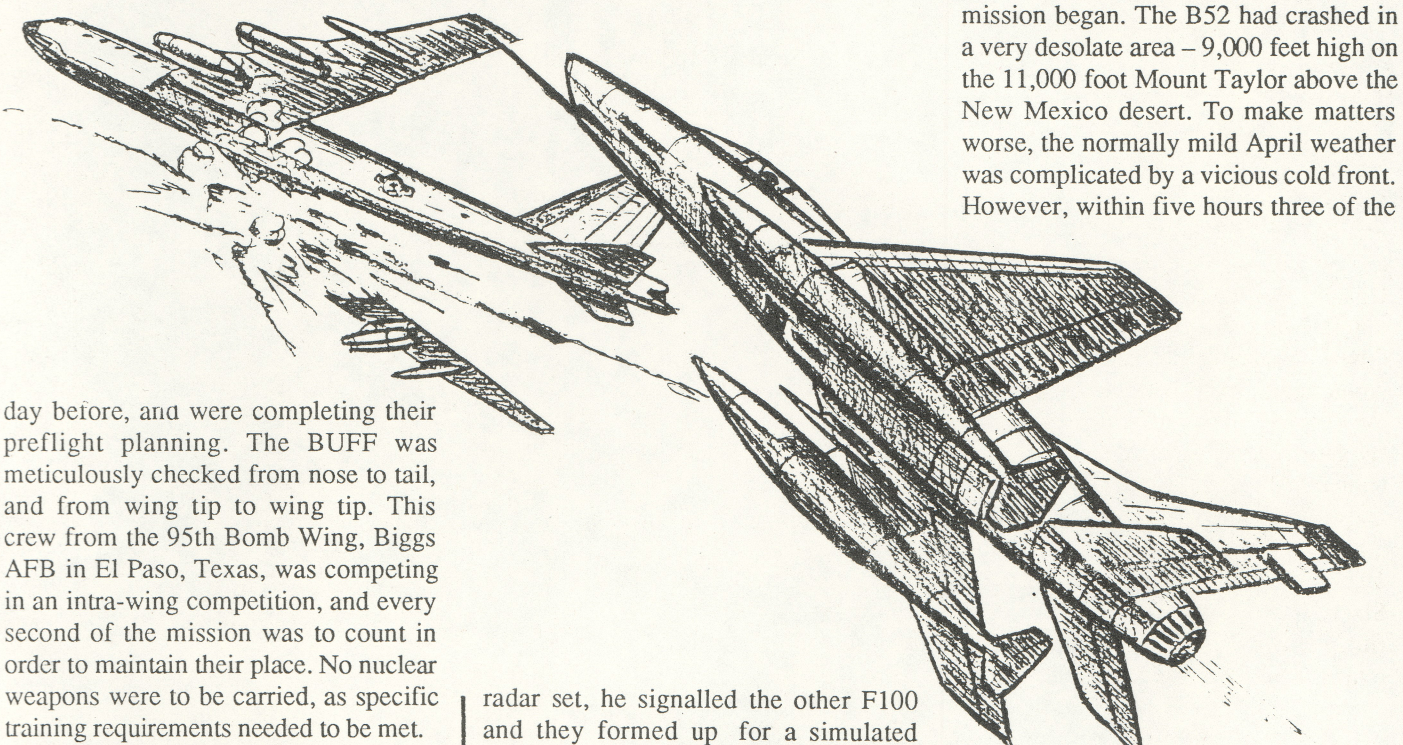
That day began routinely for the SAC crew of eight (pilot and copilot, two navigators, an electronic-warfare officer, an air electronics officer, a Crew Chief in charge of maintaining the bomber's complicated flight systems and a tail gunner), who had been briefed the day before, and were completing their preflight planning. The BUFF was meticulously checked from nose to tail, and from wing tip to wing tip. This crew from the 95th Bomb Wing, Biggs AFB in El Paso, Texas, was competing in an intra-wing competition, and every second of the mission was to count in order to maintain their place. No nuclear weapons were to be carried, as specific training requirements needed to be met.

The *Civdad Juarez* (named for El Paso's sister city across the Mexican border) rolled down the runway and proceeded to take off. The SAC crew operated in the relaxed, professional manner expected as the mission objectives were accomplished.

Over the desert, two New Mexico National Guard F100's of the 188th Fighter Interceptor Squadron circled and waited for the B52. The local Ground Controlled Intercept Station, 'Blush First', queried the pilots if they had completed their Armament Safety Check.

Both pilots checked the position of four switches and several circuit breakers. The Safety Check was completed, and neither 20mm cannon in the nose or the two heat seeking Sidewinder missiles on the wings, could be fired. The Air National Guard flies its missions prepared for combat. If the target (B52) had been unfriendly, the pilots could have switched instantly to a combat mode and launched an attack. The Guard is a unique and proud organization composed of citizen soldiers, who meet the same rigid requirements of reqular Air Force Pilots.

When James Van Sycoc, a ten year veteran, had acquired the target on his radar set, he signalled the other F100 and they formed up for a simulated missile attack. Meanwhile, inside the B52 cockpit, Copilot Captain Ray Obel caught a glimpse of the "Huns" rolling past. They watched as they carried out their maneuver. The first pass was a radar 'kill' and the F100's circled around for a second run.



At an altitude of 36,000 ft., Van Sycoc watched and felt the usual exhilaration as he approached the B52. What he wasn't counting on was the slight jerk he felt as one of the sidewinders streaked toward the Bomber. The heat-seeking missile headed straight for the hot exhaust gases streaming from the B52's left wing and exploded. The intense orange flash and black smoke that followed forced the plane to roll to the left. Capt. Blodgett fought the controls for a second, then ordered the crew to bail out.

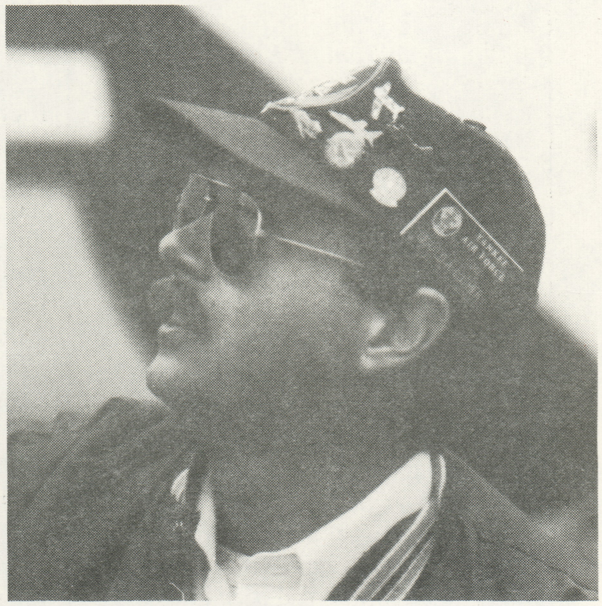
The 'G' forces were so great in the plummeting aircraft that the pilot sensed, rather than felt himself pull the handles on his ejection seat which propelled him into the atmosphere.

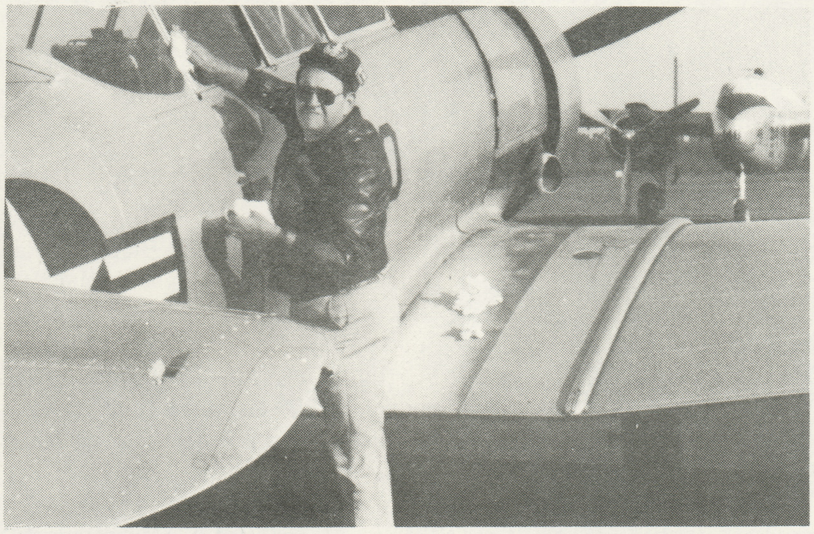
Although low on fuel, the two F100 Sabres sent out the standard distress signals and began to search for parachutes. All too quickly they too had to return to Kirkland AFB, or they would be in danger of crashing.

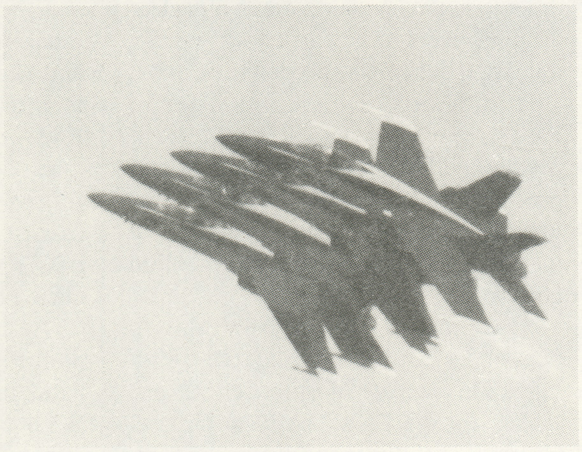
Almost immediately the rescue mission began. The B52 had crashed in a very desolate area – 9,000 feet high on the 11,000 foot Mount Taylor above the New Mexico desert. To make matters worse, the normally mild April weather was complicated by a vicious cold front. However, within five hours three of the crew were rescued. Pilot Blodgett, Tail Gunner S/Sgt. Ray Singleton and EW Officer Capt. George Jackson were badly injured. Blodgett had a fractured pelvis, Singleton was badly burned after jettisoning the tail turret, and Jackson had broken his back. Jackson was lucky to have been spotted, as a rescue helicopter had already pulled away, and a

(Continued on Page 15)

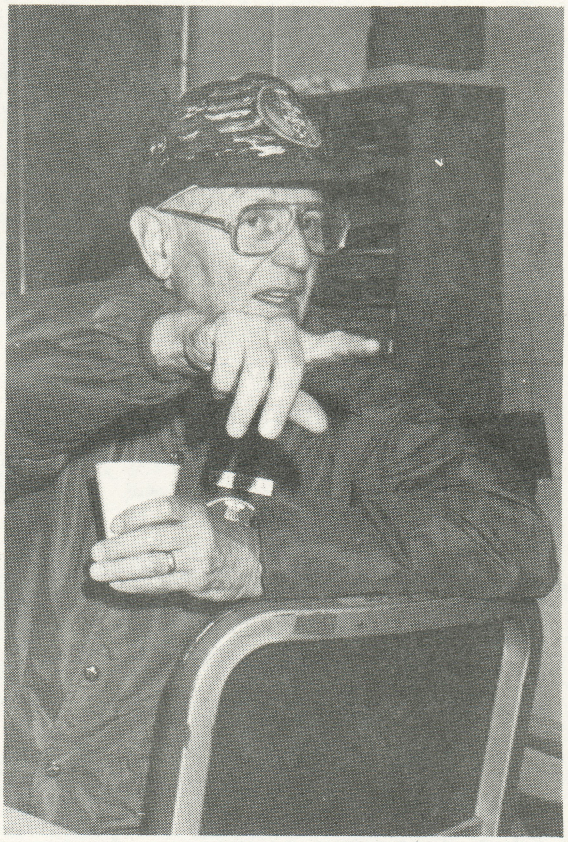
Yankee WINGS
THE PHOTO SECTION
Founders' Day '87... etc.







YANKEE AIR FORCE



Revving Up The Yankee Air Force

Editor's Note: The following article originally appeared in the June 1983 issue of *Ford Times*, and is reprinted by permission of the Ford Motor Company. The artwork which accompanied the article could not be reprinted, however the original watercolor montage was subsequently presented to the Yankee Air Force and is on display in the YAF room of the Yankee Air Museum.

Rolling a new bomber containing 1 and 1/4 million parts off an assembly line every 55 minutes seems incredible, even in today's highly automated industrial age. So it was no wonder that aviation experts back in the dark, World War II days of the early 1940s said it couldn't be done.

The mass-production methods used to build automobiles, they scoffed, just wouldn't work in assembling anything as big and complex as combat aircraft.

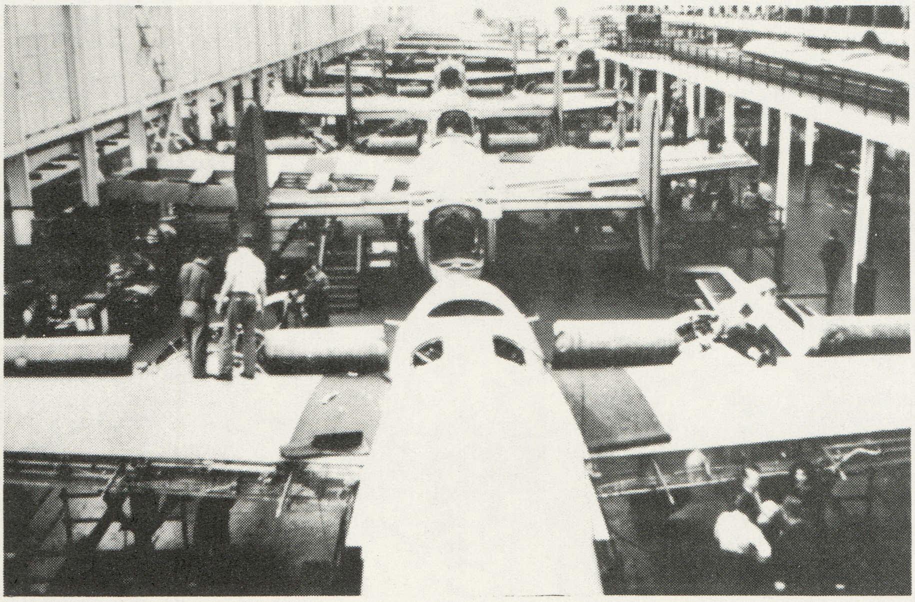
But under heavy pressure from the plane-short military, Ford Motor Company proved to the world it could be done, hour after hour. Over a 3 and 1/2 year period, nearly 8,700 B-24 Liberator bombers left Ford's Willow Run Bomber Plant, 35 miles west of Detroit. That output accounted for almost half the total production of B-24s by the U.S.

Now, a group of World War II aircraft buffs has embarked on a mission to preserve the memory of the B-24 and the innovative production system that produced it in such quantities. The group, the Yankee Air Force, is modeled after the well-established Confederate Air Force in Texas. The YAF has begun acquiring old military planes and is transforming one of Willow Run's original hangars into a headquarters and museum.

YAF membership has already mushroomed to more than 1,300 in a little over 2 and 1/2 years.

As a centerpiece for the museum, the YAF is searching for a B-24, preferably one built at Willow Run. It is believed that only three of the Ford-built planes are still around. The group thinks the best chance of finding one is in India, where many B-24s ended up pulling patrol duty for the Indian government after World War II.

During a three-and-one-half year period nearly 8,700 B-24 bombers left Ford's Willow Run Plant. (Ford Archives)



Meanwhile, the YAF has acquired several military planes, including a C-47 transport and an F-84 jet fighter. The money to buy and recondition them comes from membership fees, rental of hangar space to flyers who use the still-operational Willow Run runways, and the sale of club souvenirs. But the biggest fund-raiser is an airshow the YAF co-sponsors in June at the field. As they did last year, the U.S. Navy's famed Blue Angels will fly in for this year's show, June 11 and 12.

When they're not working on shows or rebuilding the old planes, YAF members are busy restoring the long-neglected, 40,000-square-foot hangar, leased cost-free from Wayne County, which now owns and operates Willow Run. Using donated materials and equipment, volunteers work nights and weekends to make the YAF dream a reality.

Members so far have put in some 200,000 hours in scrubbing, painting, wiring, plumbing, carpentry and general repair, estimates Dennis Norton, one of the YAF's three founders and its first president. "It'll take another 100,000 hours to get the place in tip-top shape," Norton says. "It's a massive undertaking, but we're resolved to succeed."

The club evolved in September 1981, from conversations Norton, a florist, had with Gary Bassett, and auto parts supplier, and Dennis Neveu, an accountant. The three businessmen, none of whom have any military aviation background, make flying their hobby.

"The more we talked about the club, the more feasible it seemed," says Norton. "Before we knew it, we caught the interest of others, and YAF was off and flying."

The club expects to pick up momentum and members as YAF chapters are added around the country. Norton notes that members aren't all pilots or aircraft mechanics. Ranging in age from 18 to 70, they are a cross section of people from all walks of life who share a basic interest in aviation – and a special appreciation for the B-24.

(Continued on Page 12)

Membership Report

by Charlie Lingenfelter

The following (45) new members have joined our ranks since August 31, 1987 (through October 16, 1987). This includes Willow Run (38), Mid-Michigan (1), Northeast (4) and Wisconsin/Illinois (2).

Willow Run – #2820 Mary Ann Morosky, #2821 Jesse C. Woodham, #2822 Wm. G. Folgmann, #2823 Richard H. Antosik, #2824 Albert J. Grates, #2825 Richard Evans, #2826 Richard R. Willoughby, #2830 James A. Kandrevas, #2832 James Craig Bowlby, #2835 Thomas Posch, #2836 Thomas J. Ardinger II, #2837 Raymond E. Nickels, #2839 Phillip Handleman, #2840 William Robine, #2841 Richard B. Robine, #2842 James J. Harris, #2843 Daniel Creviston, #2844 Donald B. Pompelia, #2845 David G. Morse, #2846 Viola M. Morse, #2847 Gerald E. Tyler, #2848 Martin F. Downs, #2849 Earl W. DeHayes, #2850 William F. Betz, #2851 Marcia Betz, #2852 Charles S. Blakely, #2853 John G. Roundtree, #2854 Bruce M. Belan, #2855 Harold E. Schoen, #2856 Max Tedford, #2857 Sally Tedford, #2858 Phillip C. Schoen, #2859 Richard Flood, #2860 Harry E. Terrell, #2861 Alexander J. Shimon, #2862 Walfred N. Pentinmaki, #2863 Craig Peterson, and #2864 Charles W. Marotske.

The Mid-Michigan Division welcomes – #2831 David E. Hingst; Northeast Division – #2827 David Kuznet, #2833 Timothy J. Dyas, #2834 Leonard H. Frisco and #2858 Phyllis R. Williams; and the Wisconsin/Illinois Division has enlisted #2828 James H. Wilson and #2829 Orin M. Allen.

Howard Hughes' 1938 film epic, "Hells Angels" (first made in 1927) used the services of 39 pilots and 87 planes.

HOW WE FIRST OPENED THE YAF HANGAR DOORS

(Continued from Page 3)

large pry bars, we rolled the doors open and then stepped back to admire our work and cheer loudly.

Our cheers, however, were premature. With a sudden loud crack, our makeshift post split about a third of the way from its top. Nothing fell but dust, but now we faced yet another problem.

Ron cautiously lowered the jack and the post was laid on the floor for repairs. Two hours later, the heavily reinforced post was again jacked up and the doors were closed. Now we had doors that would work, but only after the center of the roof span was jacked up. Obviously, it was not a very practical arrangement.

A local company came to our aid, volunteering to lower the brackets on top of the doors. After two weeks of cutting and welding, we had hangar doors that would work without jacking up the roof. The tracks were cleaned and the broken glass was replaced by Frank Modlinski and his crew. We were in business by mid-April.

However, we still weren't finished with those troublesome doors. One day, we found out the hard way that there were no stops on one of the doors when it continued to roll right off the track while it was being closed. Fortunately, the top bracket held and kept it from falling. A half-dozen of YAF's finest got busy with pry bars and returned the door to its track with no additional problems.

During the '82 airshow weekend, one of the Blue Angel A-4 Skyhawks was moved into the hangar for some maintenance and left there over night. But as one of the center hangar doors was being closed, its roller totally self-destructed and the door was stuck closed with the Blue Angel aircraft imprisoned inside.

The YAF crew went into action. After much effort, they got the shattered roller off the door and rushed it over to the GM Hydramatic plant across the airfield. Then the plant's midnight shift in the machine shop worked all night to rebuild the roller.

By 8:00 a.m., it arrived at the YAF hangar. By 9:00 a.m., it was installed on the door. And by 10:00 a.m., right on schedule, the Blue Angel aircraft was rolled out to the flight line, ready for Sunday's show. Once again, good ol' Yankee (Air Force) ingenuity had won out against a cantankerous four-decade-old set of doors.

Now there's talk about opening the set of doors encased in the wall at the opposite end of the hangar. I don't want to get wrapped up in the decision-making process here, but let me ask one favor if the YAF decides to proceed. Just *don't* call me!

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National Board Receives Election Results

Results of the 1987 YAF National Election were presented to the Board of Governors at their regular November meeting. President Harry Terpstra and Directors Walt Hart, John Snider and George Whitfield were re-elected. Rosemary Goodes was elected Vice-President, and newly-elected directors include Bill Mermelstein, Joe Oberlee, Joseph Slavik and Gerald Vogelei. All of the above serve for two years except Goodes, Oberlee and Terpstra, whose terms expire in one year. Of the 1370 ballots issued, 590 were returned, which represents 43% participation.

It was reported that title to the B-25 Mitchell bomber purchased from Glenn Lamont was officially received October 19. A public ceremony to mark the aircraft's turnover to the YAF is scheduled for noon, October 31. Acquisition of another aircraft, the F-102 which has languished in the sun at Tyndal AFB, FL. awaiting a special flat-bed rail car, is a step nearer to completion with the arrival of one wing by truck. The other wing is expected on a "space-available" basis by the end of the year, and the fuselage hopefully next Spring. Status of the B-17 restoration was also presented.

Reports from the divisions noted that members from both Mid-Michigan and Saginaw Valley were among those who volunteered for Founders' Day/Air Show duty.

The inspection, cleaning and repair of the L-2 wing ribs was completed by Saginaw Valley, and reassembly of the wing will follow. They have also steam-cleaned the SNB and added wheels. The airplane was then moved (by "people power") to another hangar with "an excited Fergus Mann" in the cockpit. The Illinois/Wisconsin Division removed the horizontal stabilizer from the AT-11 to assess the extent of any corrosion. It was estimated that this aircraft is still 2-3 years from flying status. Northeast Division is expecting the arrival of the Percival Pembroke in early November. It is hoped that a feature story on this aircraft will be available for a future issue.

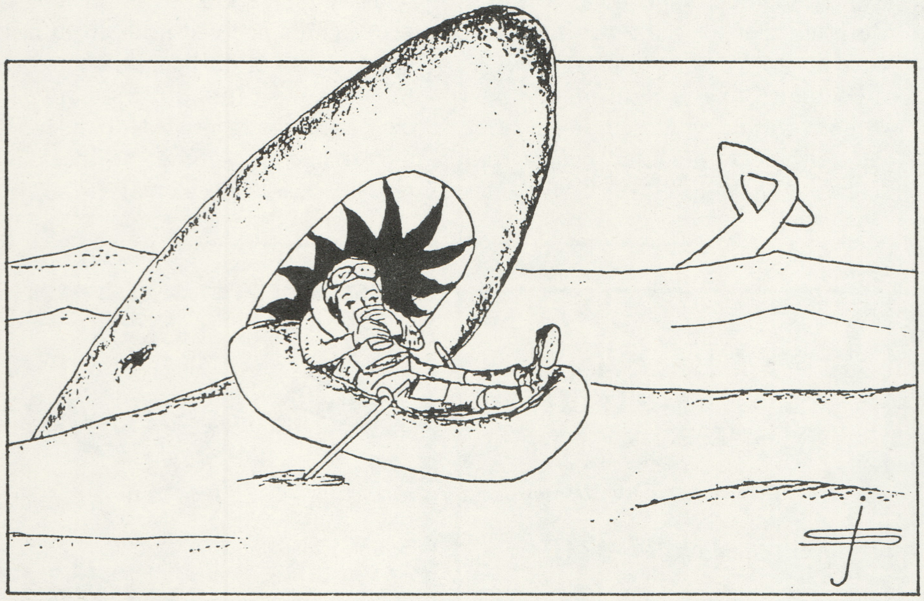
Revving Up The Yankee Air Force
(Continued from Page 10)

"It was a magnificent machine," says Norton, "and people took pride and pleasure in building it." To the Willow Run Bomber Plant's 40,000 workers, the B-24 was known as "The Lib." Measuring 67 feet, nose-to-tail, with a 110-foot wing span, the B-24 could fly 2,000 miles nonstop with 8,000 pounds of bombs in its belly and 8,000 rounds of .50 caliber ammunition in its machine-gun turrets.

Norton expects YAF's museum, like CAF's, to become a national and international attraction. The museum is expected to be fully operational in about a year.

Information on Yankee Air Force membership and the museum can be obtained by writing: Yankee Air Force, P.O. Box 1100, Ypsilanti, MI 48197.

Detroit hosted our nation's first aircraft show on April 21, 1928.



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but the production order was awarded to the Packard Motor Car Company in Detroit for 1025 of these aircraft. The first example was completed by Packard on May 15, 1918, and was test-flown at Selfridge Field for acceptance by the Air Service. Packard eventually built 25 LUSACs before the Armistice was signed, and completed three more after the war ended, but the remainder of the order was cancelled. Most of these aircraft were test-flown at Packard's own flying field, which had been built in early 1918 at the intersection of 10 1/2 Mile Road and Gratiot Avenue in Roseville. Two LUSAC fighters were sent to France for evaluation, but neither saw combat before the war ended. The only remaining example of a LUSAC-11 is on display in the Musee de l'Aire in France.

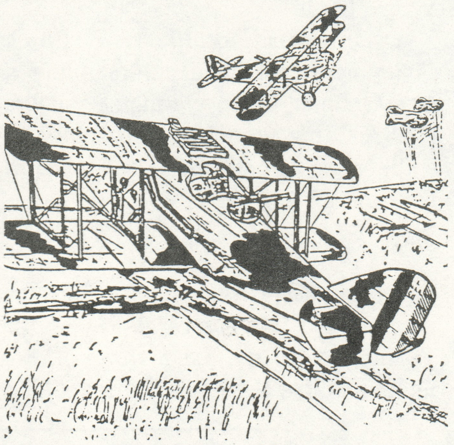
Although the Packard Le Pere LUSAC-11 did not enter combat, it served well in the post-war years as a research plane and as a test bed for the world's first supercharged aircraft engine. This was a Liberty engine using a General Electric exhaust-driven turbo-charger, and many of the early developments in supercharged engines were conducted with this engine/airframe combination. In 1920 Major Rudolph Schroeder established an altitude record of 33,113 feet in a LUSAC, the first flight ever made over 30,000 feet. In 1926 Lt. John McReady reached 38,704 feet setting a new altitude record for which he won the Mackay Trophy. The Le Pere biplane even raced in the National Air Races, when Lt. T. J. Koenig won the Liberty Engine Trophy for Liberty-powered aircraft, with a speed of 128.8 mph.

The 28 LUSAC airplanes built by Packard were the only aircraft ever built by that famous automobile company. The Packard Motor Car Company was established in 1902 when Henry Joy bought the Warren, Ohio company of that name and moved it to East Grand Boulevard in Detroit. Joy was an ardent supporter of aviation, and due to his interest Packard was often involved in early aviation developments. As previously mentioned, Packard engineers

Packard Motor's Lusac 11

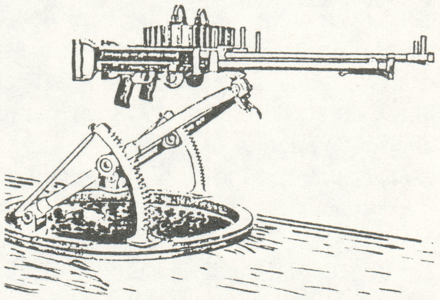
(Continued from Page 5)

had designed a prototype V-12 aircraft engine in 1915, and during World War I the company was active in developing the Liberty engine and building it in large numbers. In the post-war years, Packard built a series of inverted V-12 engines (the 1A-1500 of 600 hp and the 2A-2500 of 800 hp) that were used in a limited number of military aircraft. They also built a 24-cylinder "X" engine that was used in Major Al Williams's Kirkham racer, a Schnieder Cup racer which flew an unofficial 322.6 mph.



Lusac 11

In 1927 Packard discontinued the manufacture of liquid-cooled engines to concentrate on the development of Diesel aircraft engines. On September 19, 1928, Packard announced a new, nine-cylinder, radial air-cooled Diesel engine of 225 hp, designed by L. M. Woolson, and flight-tested in a Stinson Detroiter. Packard was awarded the Collier Trophy for this accomplishment, but sales were limited, and the engine was never produced in large numbers. Packard had an enviable reputation as a builder of high quality luxury automobiles, and during the 1930s many of the top-of-the-line Packards were powered by V-12 engines. As a result of that background, Packard signed an agreement in 1940 to build Rolls-Royce Merlin V-12 aircraft engines for the Royal Air Force. These engines were used to power the British Hurricane and Spitfire fighters which won the Battle of Britain. This engine was later used in our air force's North American P-51 Mustangs. Packard built a total of 55,523 Merlin engines during World War II, carrying on the tradition they had established during the First World War with the Liberty engine. An interesting comparison can be made between these two engines: the Liberty had a displacement of 1,650 cubic inches, and put out 400 hp, whereas the Merlin had exactly the same displacement, but developed 1,300 hp. This is a good example of the rapid development that took place in aircraft engines over a twenty year period.



In 1951 Packard entered the jet age when they signed a licensing agreement with General Electric to build J-47 turbojets, a small number of which were built in a new plant in Utica, Michigan. By that date, however, Packard was in deep financial trouble, and was absorbed by the Studebaker Corporation. The last Packard automobile was built in 1958, bringing to an end a long history of luxury automobiles as well as their well-built aircraft products. The Packard slogan, "Ask the man who owns one!" applies equally well to their fine cars and their reliable aircraft engines.

The U.S. Army's first permanent flying school was established at College Park, Maryland, on April 11, 1911.

The first pilot physical examination requirements were published by the Army in February, 1912. A week later, the War Department officially recognized the Military Aviator rating.

he'd be grounded if he went to an Air Force doctor, he had a civilian doctor tape his ribs.

On the day of his scheduled flight, October 14, 1947, Yeager (in intense pain) had a pilot friend (who knew what the flight meant to him) rig a broomstick so Yeager could open and close the cockpit door of the X-1. Chuck Yeager squirmed and wiggled his way into the 31-foot-long orange bullet of an X-1 nestled in the belly of the B-29 mother plane and locked the cockpit shut – all with the aid of that broomstick! Moments later, the X-1 dropped away from the B-29, and Yeager streaked through the sound barrier (at MACH 1.5 or 670+ mph) at 43,000 ft. (This record-breaking flight was kept secret for eight months because of its critical military importance.) President Harry Truman awarded Captain Yeager the Collier Trophy in 1948 for being the first human to fly faster than sound. Yeager's reaction to all this was typical: "Aw shucks . . . It was no big deal. Just another job."

Yeager and his flying prowess were now famous – he was a pilot's pilot and he proved it. Yeager once lied over the radio to a test pilot who was about to pass out from lack of oxygen (due to a malfunction) that he had a flame-out on his F-86 chase plane. Yeager told him to follow him down. This test pilot did follow Yeager down to a lower altitude, regained consciousness, and landed safely. Yeager also talked fellow test pilot Bill Bridgeman down when Bridgeman's Douglas Skyrocket ran out of fuel and his canopy iced up.

After a defecting North Korean pilot landed a MiG-15 at Kimpo Field, Seoul, Korea, Yeager test-flew it in February, 1954. Thanks to his evaluation, American pilots now could cope with this Communist fighter.

Flying Close to Death

If the law of averages would apply to Charles Yeager, he certainly would have been dead long ago. During a 1953 flight in an X-1A, Yeager almost died flying at over 1,650 mph (a record) he spun out and fell 55,000 ft. in 51 seconds. He retrimmed the experimental

"The Right Stuff!"

(Continued from Page 6)

plane's stabilizer and recovered. This was a dicey flight because the X-1A had no ejector seat. President Eisenhower presented him with the Harmon Trophy in 1954. In another mishap, he escaped death in a helicopter crash. While flying an F-104 when he had to bail out, his parachute caught fire and he was severely burned.

Yeager flew over 10,000 hours in 155 types of aircraft like a knight courting the air. The Right Stuff? Yeager has it!

Other less notable Air Force assignments included commanding a fighter squadron in Germany and the NASA flying school for astronauts. In addition, he was an Air Force advisor in Pakistan.

More Combat

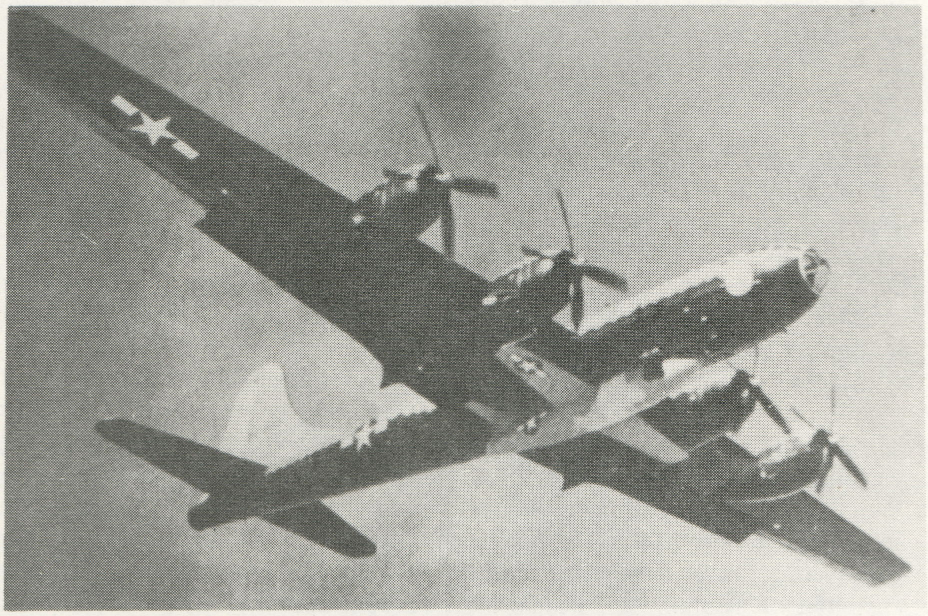
During the Vietnam conflict, Yeager commanded a wing of B-57s and a Tactical Air Command wing of F-4 Phantoms. He flew what he loved and was best at: Dangerous, hellish on-the-deck combat missions.

Full-Throttle Living

Retired from the USAF, General Yeager lives life in the Fast Lane. He's a wood worker, movie consultant *(The Right Stuff* and *Smokey and the Bandit II),* does commercials for television and magazines. He's also active in veteran's affairs. He recently launched a fund-raising drive for the Veteran's Memorial Park near Mount Rushmore, South Dakota, which he calls "A living memorial to all veterans."

A Flyer on Flying

Charles Yeager is whimsical, yet dedicated, skillful and disciplined. Yeager on new aviation technology: "Technology has removed much of the stress and dangers that made test piloting similar to being a matador." On combat flying: "That willingness to risk everything in behalf of a mission hasn't changed, in my opinion, from the day I won my wings. To me, that's what made the Air Force so special and why I loved it so much. If I auger in tomorrow, it won't be with a frown on my face. I've had a ball."



The second XS-1 is carried to launch altitude by B-29 for the first powered flight, Dec. 9, 1946. (USAF)

Buff Briefs

(Continued from Page 7)

last minute 'spot check' of the area revealed his parachute.

The weather turned from bad to worse as temperatures dropped to near zero, while the winds howled at 60 knots or better. That night, as the storm raged on, one ground rescue party managed to reach the crash site. What they witnessed was an 8 foot deep by 30 foot wide crater, filled with smoking, black metal. In the debris, they found three bodies. Later they were identified as 2nd LT. Glen Blair, Electronics Warfare Officer, and the two navigators, Captains Steve Carter and Pete Gineris.

No one else was expected to survive such adverse conditions. Yet, when the weather finally cleared, an H21 Helicopter found the Crew Chief, S/Sgt. Manuel Mieras waving an improvised crutch to signal the rescue chopper. He was unable to say how he left the aircraft, as he had not been in an ejection seat. He broke his leg when he hit the ground, and managed to hobble over to a shepherd's shack where he passed the time away playing pinochle.

On Sunday, the remaining crew member, Copilot Opel was rescued when he used his Air Force issued signal mirror to flag down a passing C47. He had landed in a cactus patch and spent some time, the first evening, picking spines from his face and hands. For warmth, he wrapped himself in his parachute and propped his liferaft over himself. In this manner, he remained quite comfortable the rest of the evening.

After the crew was accounted for, the accident investigation began. With extensive scrutiny into the F100's pilot's background (a veteran of 10 years Air Force Service and 1,900 hours flying time, with 1,000 hours in the F100) it was concluded that the accident was not caused from pilot error. After returning to the base, the aircraft's missile configuration was such that the sidewinder was neither deliberately or accidently fired from the cockpit.

What the investigation board did find was that a tiny drop of moisture had shorted out a circuit, causing the missile to fire. In effect, the sidewinder had fired itself!

One of the finest gestures to come out of the entire ordeal was that the survivors of the B52 sent a message to Van Sycoc (days before the official cause was found by the Accident Investigation Board), stating that they knew he was not at fault, and they wished him well.

M-48 (Continued from Page 2)

exchange for the privilege of having it on display. In May of this year ERIM mechanic Tom Griffiths rigged up a temporary control system to enable the tank to move under it's own power. Assisted by YAFers Art Dallapi, Norm Ellickson, Art Elsey, Dean Greene, Norm Jones and Charlie Lingenfelter, it was driven to it's current location in front of the hangar. Although the 90 mm cannon will never fire, the vehicle is still used occasionally by ERIM. Dean Green indicated the "crew" hopes to replace the missing machine guns as well as other minor restoration tasks.

The hull and turret are cast iron. A 'dozer blade can be fitted to the hull. The 90 mm cannon is augmented by a .30 cal. MG in the hull and a .50 cal. MG in the tank commander's cupola. The M-48 entered operational service with the U.S. Army in 1953, and is also used by more than a dozen other nations. In 1960 production ended in favor of the M-60, which is an improved M-48 with a 105 mm cannon.

The following M-48 data was extracted from *The Illustrated Encyclopedia of the World's Tanks and Fighting Vehicles:*

Length (incl. cannon):	24 ft., 5 in.
Hull:	22 ft., 7 in.
Width:	11 ft., 11 in.
Height:	10 ft., 3 in.
Weight (combat):	104,000 lb.
Armor:	1/2 in. to 4 3/4 in.
Engine:	750 hp., 12 cylinder Continental air-cooled Diesel
Road Speed:	30 mph
Range:	288 miles
Crew:	Commander, Driver, Gunner, and Loader

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Yankee Air Force Pot-O-Gold?

by Rosie Goodes

History has told us of a pot-of-gold at the end of rainbows. We believe that we have found it. In our search for donations, we have identified a corporate program of "MATCHING GIFTS" and this is how it works. If the company you work for, or have retired from, is a company that donates to "Historic Museums" they will match, dollar for dollar, up to four to one of the donations that you have given to the Yankee Air Museum.

Step #1 is to find out if your company is among those who support this program. Ask your Personnel Department or Matching Gift Coordinator for a form, fill it out and send or give to: Treasurer, Yankee Air Force, P.O. Box 1100, Ypsilanti, MI 48197.

The deadline for 1986 donations (B-17) is December 31, 1987. We can still recover some donations from 1986 if you act quickly! For instance, if you donated $75 to the B-17 and you are employed by a company that pays two-for-one the total donation would be $75 + $150 = $225 for a $75 donation. Participating companies issue checks to us quarterly.

Members, please act now! Ask your company TODAY, fill out your portion of the form and send it to Headquarter's Treasurer. We have only a few short weeks to recover 1986 donations. INQUIRE TODAY for 1986 & 1987 donations. Our pot-of-gold is in sight. If you have any questions, please call Del Johnston, Rosie Goodes, Harry Terpstra or Jerry Vogelei.

A Tale of Two Pilots

Almost anyone with even a passing interest in aviation probably remembers the "peace flight" escapade of Mathias Rust, a 19-year-old West German pilot who landed his light plane in Moscow's Red Square and was sentenced to four years in a Soviet labor camp for his youthful prank.

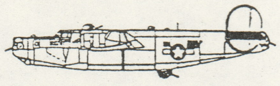
Not too many people, however, may recall the story of Roman Svistonov, a Soviet crop duster only five years older than Rust. Two days before Rust's plane penetrated Russian airspace, Svistonov flew his plane from Latvia into Swedish airspace and a crash landing in the Baltic Sea. Rescued by the Swedish navy, he received a happier kind of "sentence" – asylum in a free country.

CALENDAR

DECEMBER

2	–	Headquarters General Membership – (WR)
2	–	Northeast Division Board
5	–	Security Committee Meeting –10:00 (WR)
8	–	Membership Committee Meeting – 7:00 (WR)
8	–	Saginaw Valley Division Board
9	–	B-17 Crew Meeting – (WR)
9	–	*Yankee Wings* Staff – (WR)
9	–	Mid-Michigan Division Membership – 7:00
12	–	Photographic Committee – 10:00 (WR)
15	–	Saginaw Valley Division Membership
16	–	National Board of Governors – (WR)
16	–	Northeast Division Membership
17	–	84th Anniversary of Wright Brothers Flight at Kitty Hawk, N.C.
22	–	Wisconsin/Illinois Division Board – 7:00
23	–	Mid-Michigan Division Board

Note: All meetings begin at 7:30 P.M. unless otherwise noted.



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